

WHAT IS CLAIMED IS:

*Sub A3* 1. A flat panel display device comprising:

5 a flat panel module for receiving image control signals applied to column and row control lines and displaying an image through a plurality of LCD pixels based on the received image control signals;

column drivers each adapted to output an image control signal to an associated one of the column control lines, thereby driving associated ones of the LCD pixels included in the flat panel module;

row drivers each adapted to output an image control signal to an associated one of the row control lines, thereby driving associated ones of the LCD pixels;

15 a buffer for storing a reference voltage for a gray-scale brightness reference;

a timing controller for controlling the outputting of the image control signals from the column and row drivers;

20 a first connector electrically connected to the timing controller and adapted to externally receive an image signal and to output the received image signal to the timing controller;

25 a replaceable modular system board electrically connected to the first connector and adapted to output video control signals to the flat panel module in accordance with a function

allocated thereto; and

5 a chassis adapted to mechanically fix and clamp all components of the flat panel display device and adapted to shield electromagnetic waves generated from the system board, thereby preventing an external discharge of the electromagnetic waves.

10 2. The flat panel display device according to claim 1, wherein the timing controller receives and processes the image signal via the first connector and the reference voltage for the gray-scale brightness reference from the buffer, thereby controlling the column and row drivers.

15 3. The flat panel display device according to claim 1, wherein the system board comprises:

a second connector electrically connected to the first connector;

a third connector adapted to externally receive an analog image signal;

20 an analog/digital converter for converting the analog image signal received from the third connector into a digital image signal;

an image processor for performing an image processing for a signal received from the analog/digital converter;

25 a low voltage differential signaling unit for converting

a signal outputted from the image processor into a low voltage signal to reduce electromagnetic waves; and

a main circuit unit for controlling and monitoring all components of the system board.

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4. The flat panel display device according to claim 1, wherein the system board is replaceable with a new one to change the display function of the flat panel module into a display function corresponding to the new system board.

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5. The flat panel display device according to claim 1, wherein the chassis is provided at one side wall thereof with an insertion slot for allowing the system board to be separably mounted in the flat panel display device.

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